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EXAMINER	
IRSHADULLAH, M	
ART UNIT	**PAPER NUMBER**
3623	

DATE MAILED: 03/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

SK

Office Action Summary	Application No.	Applicant(s)	
	09/721,141	MAHAPATRO, NEELAMADHABA	
	Examiner	Art Unit	
	M. Irshadullah	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *40-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *40-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This communication is in response to amendments filed December 19, 2002.

Summary Of Instant Office Action

2. Applicant's arguments concerning claims 40, 43-48 rejections under 35 USC 102, para 7, and claims 41, 42 and 49 rejections under 35 USC 103, para 13, Paper No. 17, Office Action mailed September 30, 2002 have been considered, deemed unpersuasive and prior rejections are maintained.

3. Amends to claims 40, 41, 42, 43 and 44 have been entered.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

5. Claims 40, 43-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Hughes et al (US Patent 5,893,074).

Hughes et al disclose:

Claim 40. (Newly Submitted) A method for generating a plurality of individually schedulable assignments for a task, based upon task constraints associated with said task, said task constraints identifying N resources assigned to said task where N is a positive integer, and a required work-amount corresponding to each of said N resources (Title, Abstract, lines 1-2, col 3, lines 29, 40-43), steps comprising the steps of:

a) dividing said task into N assignments, said task comprising an amount of work, each assignment comprising a portion of the work that corresponds with an individual resource (Abstract, lines 6-8, col 2, lines 10-11, col 4, lines 30-31, Fig. 1 (10, 14a-d, 15a-d), col 5, lines 9-11, col 6, lines 19, 20, 21 and 22 recited with col 3, lines 29, 40-43, 22-25 (specifically line 25). Applicant will appreciate that "work" would encompass "project", "tasks" or both);

b) associating each of said N assignments with one of said N resources, each resource comprising one of an non-human and human object capable of performing an assignment (Col 6, lines 19, 20, 21, 22, fig. 1 (10, 14a-d, 15a-d), col 2, lines 3-7, 26-30, col 3, lines 22-25, 36-37, 40-45 read with col 1, lines 42-47. Applicant will appreciate that customarily/practically all personnel and equipment/machines/computers, area/space (human and nonhuman resources) would be included/assigned in/to the project only for their qualification/capability to performing the job/work/project/task/assignment);

c) for each assignment, identifying the task, corresponding individual resource, and one of the portion of work corresponding to a respective resource and a duration of the assignment

(Fig. 1 (15a-d), col 2, line 35, col 6, line 17 and Fig. 1 (14a-d), col 5, lines 11-12, 46-50, 63-64, col 3, lines 29, 40-43, col 4, line 61 through col 5, line 2, and col 11, lines 44-47);

d) generating a list comprising the N assignments (Abstract, lines 16-18, col 10, lines 15-17 and 7-10. Applicant will appreciate that "product" enshrines project(s), larger tasks (14a-d, Fig. 1), smaller tasks/assignments (15a-d, Fig. 1) or all of them); and

e) breaking up at least one of the N assignments into sub-assignments (Col. 5, lines 10-11 recited with lines 9-10, 49-50, 45-48 and 63-64 and Fig. 2A wherein a large-scale tasks or assignments 14a are sub-divided or broken down (up) into smaller tasks (sub-tasks or sub-assignments) 15a; 14b broken down (up) into sub-assignments (or smaller or sub-tasks) 15b, etc., etc.). Applicant will appreciably realize that it is just the matter of nomenclature and as to how one considers Hughes et al's tasks. Herein, "the project" to build a space craft for NASA is the main task (or assignment), Fig. 1 (12), col. 5, lines 7-8 read with lines 48-50. The main assignment (project) is divided (broken down or up) into next large-scale tasks (assignments) 14a-d and each of larger assignment (task) 14a-d are further broken up into smaller tasks (sub-tasks or sub-assignments) 15a-d as depicted in Fig. 2 and described in lines 9-10 above. Moreover, availability of reference's "breaking down (up)" function clearly infers that the same would be used for the claimed purpose) when a work-amount of a respective assignment exceeds a time-slot in a resource calendar (Inherent, since a task or assignment is further divided (broken down or broken up) only when work amount (discussed above) would be more than

(exceeds) the time span (time-slot), in a list of resources (resource calendar), allocated to complete the work amount, whereas listing or calendaring of resources including time spans (time slots) is inferred by the recitation of reference's abstract, lines 14-15).

Claim 43. (Newly Submitted) A computer-readable medium on which is stored a computer program for generating a plurality of schedulable assignments for a task (Fig. 5 described col 11, lines 9-32 (specifically lines 17-19), Title, Abstract, lines 1-2, col 3, lines 29, 40-43), said program performing the steps comprising:

a) receiving a task description for said task, said task description identifying N resources assigned to said task where N is a positive integer, said task comprising an amount of work, a required work-amount corresponding to each of said N resources, and one or more scheduling constraints for said task (Col 2, lines 17-19, col 5, lines 30-32 recited with col 5, lines 10-13, 46-50, col 11, lines 44-47);

b) dividing said task into N assignments, each of said N assignments identifying one of said N resources, each assignment comprising a portion of the work that corresponds with an individual resource, each resource comprising one of an non-human and human object capable of performing an assignment (Abstract, lines 6-8, col 2, lines 10-11, col 4, lines 30-31, Fig. 1 (10, 14a-d, 15a-d), col 5, lines 9-11, col 6, lines 19, 20, 21 and 22 recited with col 3, lines 29, 40-43, 22-25 (specifically line 25). Applicant will appreciate that "work" would encompass "project",

"tasks" or both, col 2, lines 3-7, 26-30, col 3, lines 22-25, 36-37, 40-45 recited with col 1, lines 42-47 and explanation in Applicant's claim 40b) above);

c) for each assignment, identifying the task, corresponding individual resource, and one of the portion of work corresponding to a respective resource and a duration of the assignment (Fig. 1 (15a-d), col 2, line 35, col 6, line 17 and Fig. 1 (14a-d), col 5, lines 11-12, 46-50, 63-64, col 3, lines 29, 40-43, col 4, line 61 through col 5, line 2, and col 11, lines 44-47);

d) associating each of said N assignments with said scheduling constraints for said task (Col 6, lines 19, 20, 21, 22, Fig. 1 (10, 14a-d, 15a-d));

e) generating a list comprising the N assignments (Abstract, lines 16-18, col 10, lines 15-17 and 7-10. Applicant will appreciate that "product" enshrines project(s), larger tasks (14a-d, Fig. 1), smaller tasks/assignments (15a-d, Fig. 1) or all of them); and

f) breaking up at least one of the N assignments into sub-assignments when a work-amount of a respective assignment exceeds a time-slot in a resource calendar (See the discussion of Applicant's claim 40e) above).

Claim 44. (Newly Submitted) A computer system for generating assignments for a task, comprising:

a) a processing unit (Fig 1 (20));

b) a memory storage device (Fig. 1 (18));

c) a program module, stored in the memory storage device for providing instructions to the processing unit (Fig. 1, col 5, lines 16-26 (specifically lines 24-26));

d) the processing unit, responsive to the instructions of the program module (Fig. 1 (20), col 5, lines 4-6, 16-32), operative to:

e) receive a task description for the task, the task description identifying N resources assigned to the task where N is a positive integer, said task comprising an amount of work (Col 2, lines 17-19, col 5, lines 30-32 recited with col 5, lines 10-13, 46-50, col 11, lines 44-47);

f) divide the task into N assignments, each of the N assignments identifying one of the N resources, each assignment comprising a portion of the work that corresponds with an individual resource, each resource comprising one of an non-human and human object capable of performing an assignment (Abstract, lines 6-8, col 2, lines 10-11, col 4, lines 30-31, Fig. 1 (10, 14a-d, 15a-d), col 5, lines 9-11, col 6, lines 19, 20, 21 and 22 recited with col 3, lines 29, 40-43, 22-25 (specifically line 25). Applicant will appreciate that "work" would encompass "project", "tasks" or both, col 2, lines 3-7, 26-30, col 3, lines 22-25, 36-37, 40-45 recited with col 1, lines 42-47 and explanation in Applicant's claim 40b) above);

g) for each assignment, identify the task, corresponding individual resource, and one of the portion of work corresponding to a respective resource and a duration of the assignment (Fig. 1 (15a-d), col 2, line 35, col 6, line 17 and Fig. 1 (14a-d), col 5, lines 11-12, 46-50, 63-64, col 3, lines 29, 40-43, col 4, line 61 through col 5, line 2, and col 11, lines 44-47);

h) associate each of said N assignments with said scheduling constraints for said task

(Col 6, lines 19, 20, 21, 22, Fig. 1 (10, 14a-d, 15a-d));

I) generate a list comprising the N assignments (Abstract, lines 16-18, col 10, lines 15-17 and 7-10. Applicant will appreciate that "product" enshrines project(s), larger tasks (14a-d, Fig. 1), smaller tasks/assignments (15a-d, Fig. 1) or all of them); and

j) breaking up at least one of the N assignments into sub-assignments when a work-amount of a respective assignment exceeds a time-slot in a resource calendar (See the discussion of Applicant's claim 40e) above).

Claim 45. (Newly Submitted) The computer system of Claim 44, wherein the processing unit is further operative to set a work-amount for each of the N assignments to the total amount of required work divided by N (Inherent, since breaking a project/task into an equal number of components/tasks/assignments one has to divide by a number, say N).

Claim 46. (Newly Submitted) The computer system of Claim 44, wherein the task description incudes an assignment limit for at least one of the N resources, and the processing unit is further operative to set a work amount for each of the N assignments in accordance with the assignment limits and in a manner that the summation of all of the work-amounts is equal to the total amount of required work (Col 2, lines 5-25, claim 8 read with col 13, lines 1-11 (specifically lines 1-4, 5-8)).

Claim 47. (Newly Submitted) The computer system of Claim 44, wherein the task description includes one or more scheduling constraints for the task, and the processing unit is further operative to set a work-amount for each of the N assignments as a function of the scheduling constraints and in a

manner that the summation of all of the work-amounts is equal to the total amount of required work (Col 11, lines 40-44 (specifically lines 43-44), lines 44-47, claim 8 recited with col 13, lines 1-11 (specifically lines 1-4, 5- 8)).

Claim 48. (Newly Submitted) The computer system of Claim 44, wherein the task description includes one or more scheduling constraints for the task, and the processing unit is further operative to associate each of the N assignments with the scheduling constraints (Col 11, lines 40-44 (specifically lines 43-44), lines 44-47, col 6, lines 19, 20, 21 and 22 read with col 5, lines 9-13 and 46-50).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> **(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the pri r art are such that the subject matter as a whole w uld have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall n t be negatived by the manner in which the inventi n was made.**

7. Claims 41, 42 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al (US Patent 5,893,074) in view of Deziel, Jr. et al (US Patent 5,406,476).

In the following claim Hughes et al do not explicitly show the recited features:

Claim 41. (Newly Submitted) The method of Claim 40, wherein said task constraints identify one or more scheduling constraints {comprising one of task priority (Deziel et al: Abstract, lines 5-6, wherein activities (tasks or assignments) are allocated in order of highest priority) and assignment limit (Abstract, lines 15-16, wherein scheduling an activity (assignment or task) which is "resource feasible and achievable" clearly indicates the claimed assignment limit constraint}, and further comprising the step of associating each of said N assignments with said scheduling constraints.

However, Deziel et al teach the same (Title, Abstract, lines 3-7, col 1, lines 12-15, Figs. 3a and 3c described col 9, lines 46-68 continue col 10, lines 1-28 and 29-43).

It would have been obvious to one of ordinary skill in the project/task/assignment scheduling to incorporate Deziel et al's features into Hughes et al's invention, because it would provide an efficient method for scheduling resources amongst the various activities in light of the attendant resource and activity constraints.

In the following claim:

Claim 42. (Newly Submitted) The method of Claim 40, wherein said task constraints identify one or more scheduling constraints {comprising one of task priority and assignment limit (See the discussion in Applicant's claim 41 above)} and further comprising the step of associating each of said N assignments with said task being divided.

Hughes et al show:

divided tasks (tasks being divided) Fig. 1 (10, 15a-d, 14a-d), yet do not show

task constraints identify one or more scheduling constraints and further comprising the step of associating each of said N assignments.

However, Deziel et al teach the same (Title, Abstract, lines 3-7, col 1, lines 12-15, Figs. 3a and 3c described col 9, lines 46-68 continue col 10, lines 1-28 and 29-43).

It would have been obvious to one of ordinary skill in the relevant art at the time of instant invention to incorporate Deziel et al's features into Hughes et al's invention, because identification of a constraint to be used and associated with a task is the integral part of task scheduling process.

Claim 49. (Newly Submitted) The computer system of Claim 44, wherein the task description includes one or more scheduling constraints for the task (Hughes et al: Col 11, lines 40-44 (specifically lines 43-44), lines 44-47), and the processing unit (Fig. 1 (20)) is further operative to:

associate each of the N assignments with the scheduling constraints (Hughes et al: Col 6, lines 19, 20, 21 and 22 and col 11, lines 44-47); and

In the undernoted element, Hughes et al do not show the following feature:

assign a priority to each of the assignments as a function of the scheduling constraints. However Deziel et al teach the same (Abstract, line 6, col 8, lines 39-44 and discussion of Applicant's claim 41 above).

It would have been obvious to one of ordinary skill in the relevant art at the time of instant invention to incorporate Deziel et al's feature into Hughes et al's invention, because assigning a priority would determine the order in which the task (assignment) be scheduled and done.

Response to Arguments

8. Applicant's arguments filed December 19, 2002 have been considered and are responded below.

Applicant in the Remake argues about what cited prior art references describe, for instance:

a) Hughes et al defines contracts and products: "Each task involves a contract between a supplier and a receiver. The contract, results in the production of a product" (Page 6, para before last, lines 4-6); and .

b) Deziel, Jr. et al is concerned with scheduling of a single activity that may be part of a group of activities: "Activities are selected and scheduled one at a time from a list of

scheduleable activities. Exactly one activity is scheduled at each step. The priority rule for scheduling an activity is to select from the currently scheduleable activities, the one which has the least total slack time from the deterministic schedule as defined above" (Page 8, lines 3-7).

In regard to a) and b) above, Applicant ought to appreciably realize that it is irrelevant as to how the references describe their inventions, such as above. What would have been the matter of interest, were the functions performed by them and whether they achieve the Applicant's invention as claimed. The answer is yes they do as explained below.

c) Hughes et al and Deziel et al do not teach or suggest the following (Page 6, lines 5-11 and page 9, lines 11-20):

1) a task comprising an amount of work . In this regard Applicant is directed to Hughes et al: Col. 11, lines 44-47, which recite "WPAs include the task's duration (line 44) and start and projected completion dates (line 47), which is in line with Applicant's definition, col. 18, line 6.

2) each assignment comprising a portion of the work that corresponds with a individual resource. Applicant is referred to Hughes et al: Col. 11, lines 40-42 recited with col. 5, lines 63-64, wherein "smaller tasks or assignments, 15a-d existing within each larger tasks 14a-d" clearly infer assignments 15a-d comprising some part (a portion) of the work in 14a-d and "users who perform the work 80" point to the corresponding individual resource.

3) associating each of N assignments with one of said N resources. Hughes et al's col. 11, lines 40-44 read with lines 56-58 and Fig. 1 depicting the tasks, 12, 14a-d and 15a-d and

Fig. 6 depicting various components (tasks, associated users (resources) who will perform the tasks).

4) non-human and human objects capable of performing assignment. For this, Applicant is referred to Hughes et al's col. 2, lines 3-7, 26-30 which recite non-human resources and col. 3, lines 22-25, Fig. 2B, described col. 5, lines 45, 52-56, 61-62 and 65-67 which recite human resources and all resources are capable performing assignment.

Similarly, in respect of items (5) and (6), Applicant is directed to the discussion of his claim 40c) and 40d) respectively.

Regarding No. (7), Applicant is referred to the discussion of instant 40e) above. Finally Applicant would like to consider the following:

In general, applicant's arguments fail to consider the full teachings of the references in light of the knowledge generally available to those in the appropriate art and the level of ordinary skill in this art. Moreover, applicant's arguments take an overly narrow view of the claim language.

The prior art relied upon in the rejection of the claims ought to be considered as a whole in order to appreciate and determine similarity or closeness of the systems under consideration, including the composition of contents and functions (or functionality) of the systems.

Then comes nomenclature, terminology and titling of the systems. The systems may be, and usually are, named, terminology used, titled differently by proponents or applicants, yet the

component composition would be same or similar and they would be performing same or similar function(s).

Conclusion

9. Applicant's any amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Irshadullah whose telephone number is (703) 308-6683. The examiner can normally be reached, M-F from 11:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor , Tariq Hafiz, can be reached on (703) 305-9643. The fax numbers for the organization is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-3900.

M. Irshadullah

February 26, 2003

TARIQ R. HAFIZ
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